

www.phoronix-test-suite.com

tr 2970wx may

AMD Ryzen Threadripper 2970WX 24-Core testing with a Gigabyte X399 AORUS Gaming 7 (F12h BIOS) and Sapphire AMD Radeon RX 550 640SP / 560/560X 4GB on Ubuntu 20.04 via the Phoronix Test Suite.

Automated Executive Summary

2 had the most wins, coming in first place for 45% of the tests.

Based on the geometric mean of all complete results, the fastest (2) was 1.009x the speed of the slowest (4). 1 was 0.997x the speed of 2, 3 was 0.998x the speed of 1, 4 was 0.995x the speed of 3.

Test Systems:

1

2

3

4

Processor: AMD Ryzen Threadripper 2970WX 24-Core @ 3.00GHz (24 Cores / 48 Threads), Motherboard: Gigabyte X399 AORUS Gaming 7 (F12h BIOS), Chipset: AMD 17h, Memory: 16GB, Disk: 120GB Corsair Force MP500, Graphics: Sapphire AMD Radeon RX 550 640SP / 560/560X 4GB (1300/1750MHz), Audio: Realtek ALC1220, Monitor: VA2431, Network: Qualcomm Atheros Killer E2500 + 2 x QLogic cLOM8214 1/10GbE + Intel 8265 / 8275

OS: Ubuntu 20.04, Kernel: 5.9.0-050900rc6daily20200926-generic (x86_64) 20200925, Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.9, OpenGL: 4.6 Mesa 20.2.6 (LLVM 11.0.0), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

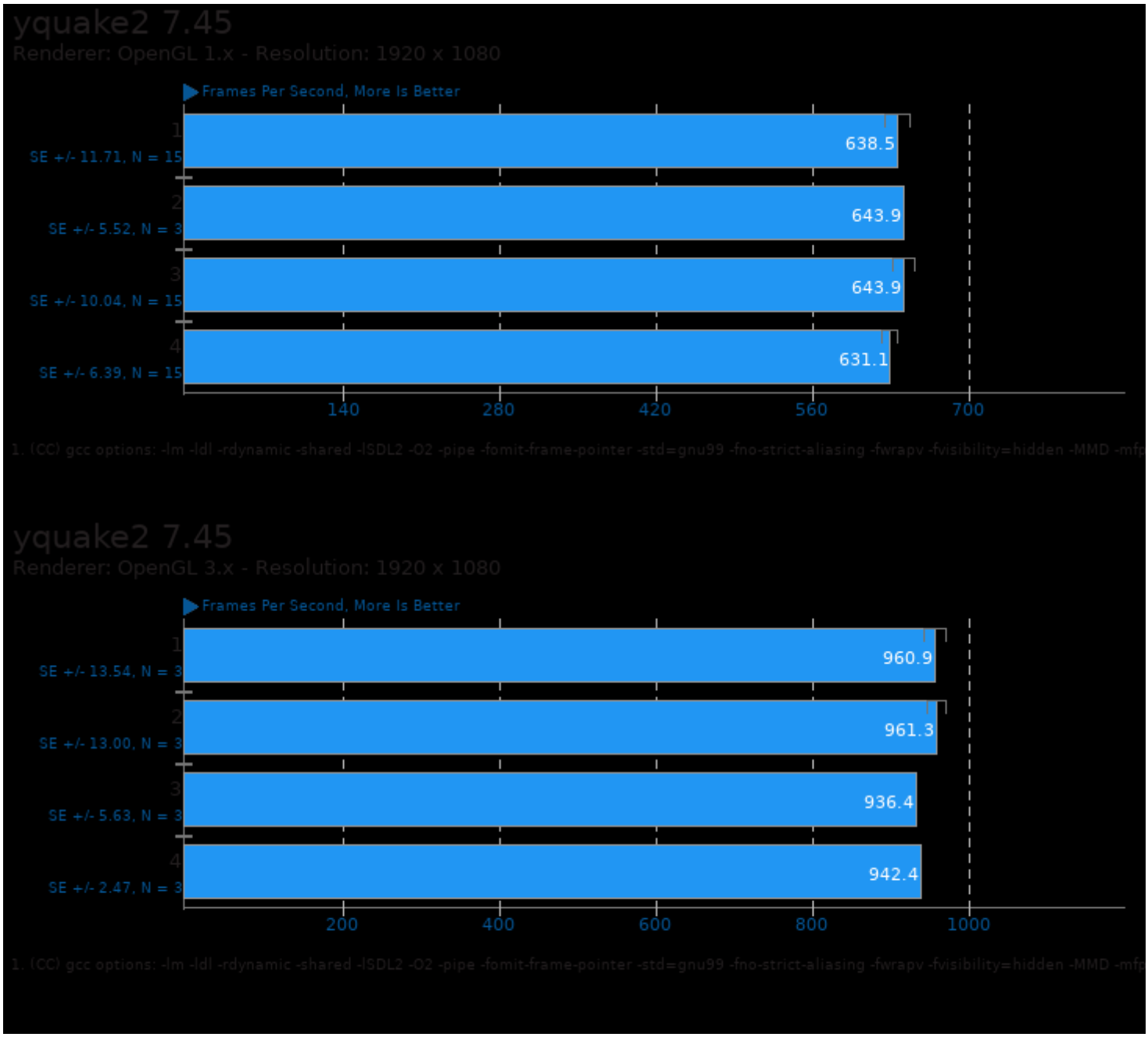
Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0x800820d
Graphics Notes: GLAMOR
Python Notes: Python 3.8.5
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	1	2	3	4
yquake2 - OpenGL 1.x - 1920 x 1080 (FPS)	638.5	**643.9**	**643.9**	**631.1**
Normalized	99.16%	100%	100%	98.01%
Standard Deviation	7.1%	1.5%	6%	3.9%
yquake2 - OpenGL 3.x - 1920 x 1080 (FPS)	960.9	**961.3**	**936.4**	942.4
Normalized	99.96%	100%	97.41%	98.03%
Standard Deviation	2.4%	2.3%	1%	0.5%
yquake2 - Software CPU - 1920 x 1080 (FPS)	104.5	**104.4**	**105.7**	**105.7**
Normalized	98.86%	98.77%	100%	100%
Standard Deviation	2%	1.3%	1.4%	0.7%
Timed MrBayes Analysis - P.P.A (sec)	172.226	**172.984**	**171.323**	
Normalized	99.48%	99.04%	100%	
Standard Deviation	3%	1.6%	3%	
QMCPACK - simple-H2O (Execution Time - sec)	**38.392**	**37.073**	37.743	
Normalized	96.56%	100%	98.22%	
Standard Deviation	3.9%	1.6%	2.8%	
Timed HMMer Search - P.D.S (sec)	**161.254**	**160.710**	160.807	
Normalized	99.66%	100%	99.94%	
Standard Deviation	0.4%	0.3%	0.1%	
Chia Blockchain VDF - Square Plain C++ (IPS)	**150533**	150467	**150367**	
Normalized	100%	99.96%	99.89%	
Standard Deviation	0.3%	0.5%	0.4%	

tr 2970wx may

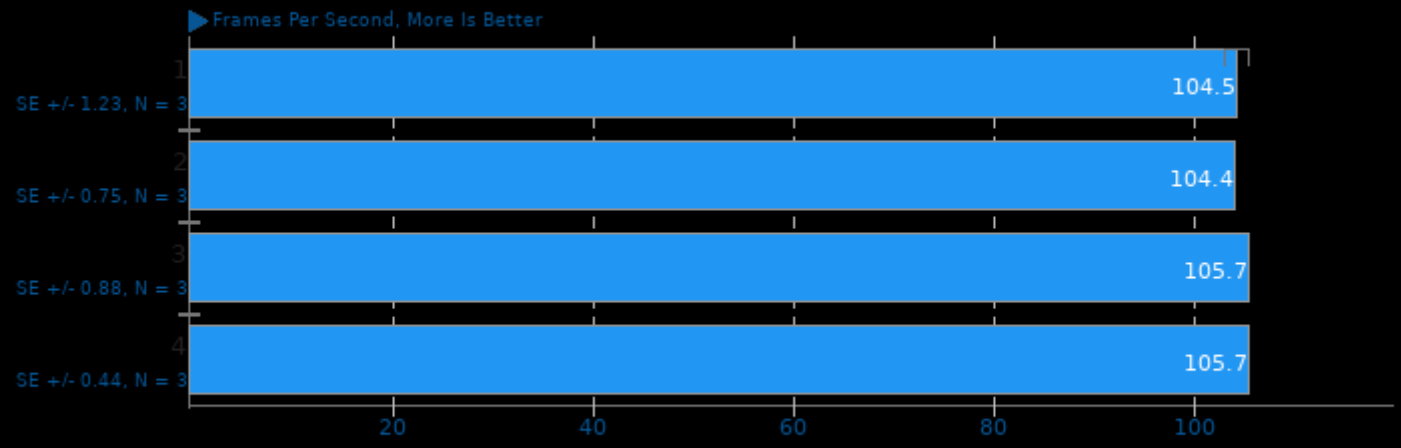
Chia Blockchain VDF - S.A.O (IPS)	**112867**	112733	**112567**
Normalized	100%	99.88%	99.73%
Standard Deviation	0.8%	0.7%	0.3%
Helsing - 12 digit (sec)	**2.638**	2.641	**2.661**
Normalized	100%	99.89%	99.14%
Standard Deviation	0.2%	0.2%	0.7%
Helsing - 14 digit (sec)	**271.732**	**268.716**	269.166
Normalized	98.89%	100%	99.83%
Standard Deviation	1.2%	2.6%	2.7%
VOSK Speech Recognition Toolkit	**19.921**	20.150	**20.178**
Normalized	100%	98.86%	98.73%
Standard Deviation	0.9%	1.4%	0.3%

tr 2970wx may



yquake2 7.45

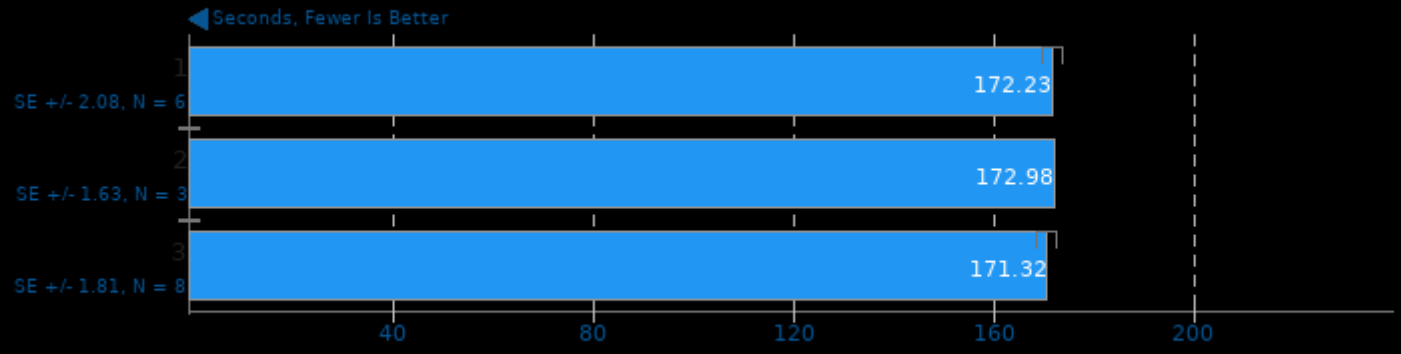
Renderer: Software CPU - Resolution: 1920 x 1080



1. (CC) gcc options: -lm -ldl -rdynamic -shared -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf

Timed MrBayes Analysis 3.2.7

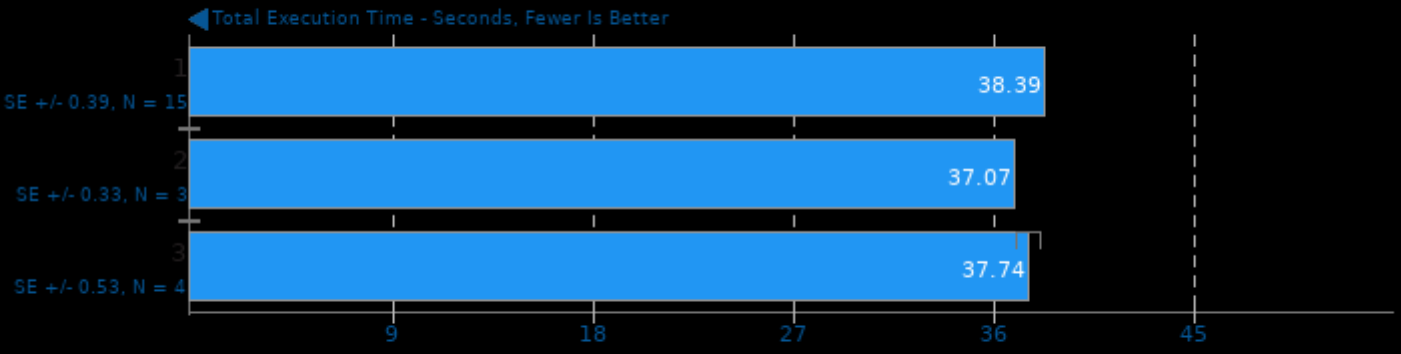
Primate Phylogeny Analysis



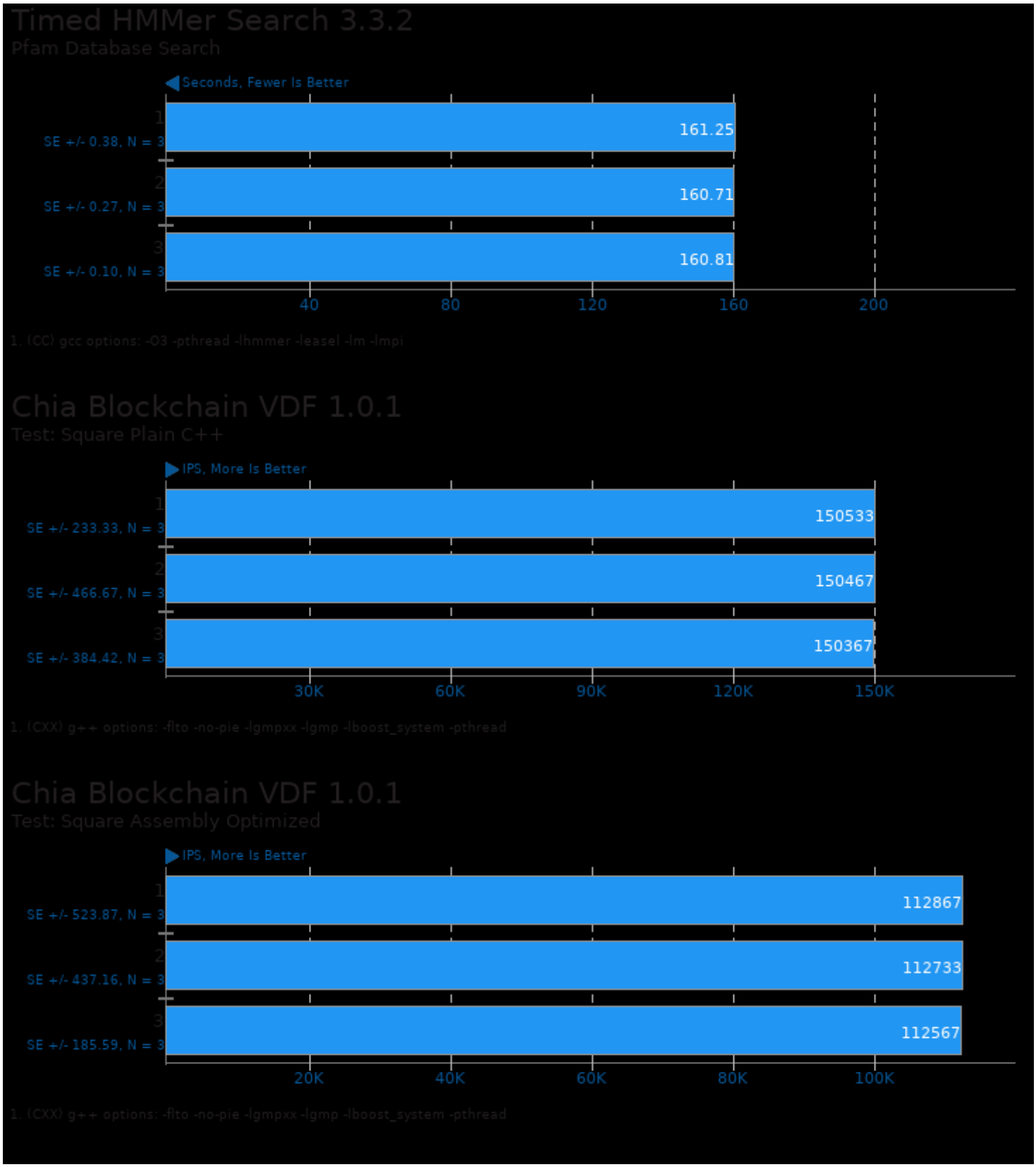
1. (CC) gcc options: -mmmx -msse -msse2 -msse3 -mssse3 -msse4.1 -msse4.2 -msse4a -msha -maes -mavx -mfma -mavx2 -mrdrnd -mbmi -mbmi2 -mad

QMCPACK 3.11

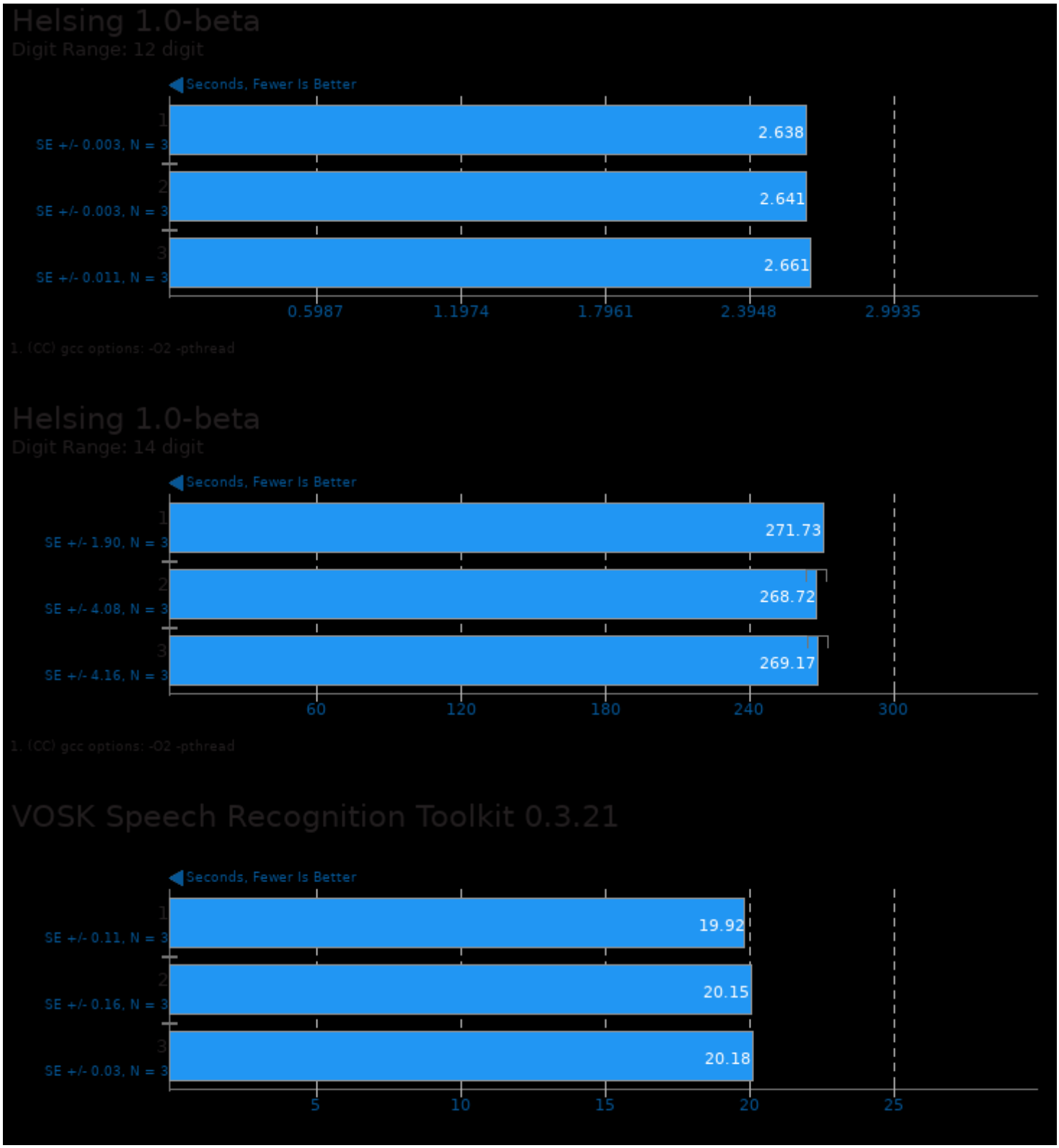
Input: simple-H2O



1. (CXX) g++ options: -fopenmp -finline-limit=1000 -fstrict-aliasing -funroll-all-loops -march=native -O3 -fomit-frame-pointer -ffast-math -pthread -lm


Timed HMMer Search 3.3.2
Pfam Database Search
Seconds, Fewer Is Better
1
SE +/- 0.38, N = 3
161.25
2
SE +/- 0.27, N = 3
160.71
3
SE +/- 0.10, N = 3
160.81
40
80
120
160
200
1. (CC) gcc options: -O3 -pthread -lhmmer -leasel -lm -lmpi
Chia Blockchain VDF 1.0.1
Test: Square Plain C++
IPS, More Is Better
1
SE +/- 233.33, N = 3
150533
2
SE +/- 466.67, N = 3
150467
3
SE +/- 384.42, N = 3
150367
30K
60K
90K
120K
150K
1. (CXX) g++ options: -flto -no-pie -lgmpxx -lgmp -lboost_system -pthread
Chia Blockchain VDF 1.0.1
Test: Square Assembly Optimized
IPS, More Is Better
1
SE +/- 523.87, N = 3
112867
2
SE +/- 437.16, N = 3
112733
3
SE +/- 185.59, N = 3
112567
20K
40K
60K
80K
100K
1. (CXX) g++ options: -flto -no-pie -lgmpxx -lgmp -lboost_system -pthread

tr 2970wx may



This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 08:06.